

RA5

MEMORANDUM

Department of Planning & Neighborhood Services



To: Honorable Mayor and City Council
Through: Charles Dawson, Interim City Manager
From: Tambri Heyden, Acting P&NS Director *T.H.*
By: James Lindsay, Acting Planning Manager *JL*
Subject: O'Toole Elms Arborist Report – Elmwood Development Project
Date: January 11, 2005

Staff requested the services of a consulting arborist and horticulturist (Deborah Ellis, MS) to provide an independent assessment of the O'Toole elms. The completed study is attached to this memo. After reviewing the previous reports on the elms and thorough evaluation of the trees, Ms. Ellis recommends the replacement of all fifty-five trees. She further concludes, "...it is not reasonable or advisable to retain the seven listed trees and exclude an activity within their fall zone."

Project binders were assembled and provided to the Council for the December 14th meeting. The binders contain all the necessary background reports and implementing documents the Council needs to take action on the Elmwood Development Project. There have been no changes in the project description since that information was provided. The additional information being provided for the January 18th meeting is the attached arborist report and the revised draft Disposition and Development Agreement. Please contact me, 586-3274 or jlindsay@ci.milpitas.ca.gov, if any of the binder's contents need to be replaced.

Deborah Ellis, MS

Consulting Arborist & Horticulturist



ARBORIST REPORT



O'Toole Elms, Milpitas

Prepared for:
City of Milpitas

December 14, 2004

Prepared by: Deborah Ellis, MS. Consulting Arborist & Horticulturist

Certified Professional Horticulturist #30022, ASCA Registered Consulting Arborist #305,
W.C.I.S.A. Certified Arborist #457

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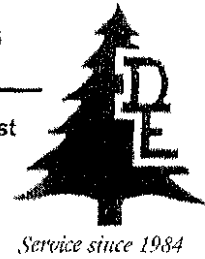
*This document was emailed from Deborah Ellis at decah@pachell.net.
PO Box 3714, Saratoga, CA 95050. Phone & Fax: 408-725-1357. Web site: <http://www.decah.com/>*



TABLE OF CONTENTS

| | |
|--|----|
| INTRODUCTION..... | 1 |
| SUMMARY..... | 2 |
| RECOMMENDATIONS | 3 |
| Background Information | 4 |
| MATERIALS & METHODS..... | 4 |
| OBSERVATIONS..... | 5 |
| DISCUSSION | 6 |
| CONCLUSION | 13 |
| APPENDIX | 14 |
| REFERENCES | 14 |
| Sources for Frontier & Accolade elms | 14 |
| Assumptions & Limitations..... | 14 |
| Tree DATA..... | 15 |

Cover photo: looking into the elm grove from Abel Street toward the Northwest. Deborah Ellis took all photos in this report on December 3, 2004.



INTRODUCTION

Assignment:

- **Evaluate the condition of each of the fifty-five American elms (*Ulmus Americana*) trees** in the historic O'Toole Elm Grove.
- **Review two previous reports on these trees** prepared by the arboricultural consulting firms Sealana & Associates (March 2000) and HortScience, Inc. (March 2004).
- **Provide an opinion as to whether seven of these trees selected by a previous consulting arborist firm (HortScience, Inc. of Pleasanton) should be preserved or removed**, relative to proposed construction (a park and residential units) within the vicinity of these trees.
- **Provide an opinion as to whether the required "replanting in kind" requirement** for elm tree that are removed. Should this be accomplished by propagating the trees by seed, suckers or cuttings used from the existing elm trees, or by planting new American elm trees of an improved cultivar?

Audience of this Report: City and citizens of Milpitas.

Goal of this Report: Guide the City of Milpitas in establishing an attractive, reasonably safe park that memorializes the historic elm grove.

Figure 1. Elm trees #201 through about #217, Northeast to southwest (right to left)





SUMMARY

The condition of the existing elm trees is poor and is unacceptable for a high use public park area. All elm trees should be removed including the seven trees listed in the HortScience report (Option #2, page 7 -- *retain trees with best health and structure but exclude all activity within their fall zone*). I recommend planting elm trees of two improved cultivars to fulfill the "replacement in kind" requirement, specifically the 'Frontier' and 'Accolade' elms. Instead of focusing on the loss of the existing historic American elm trees, look toward the future and the opportunity to plant a new forest within the public park area — a forest of vigorous, healthy young trees that will have a long useful life in the landscape and will commemorate the previous O'Toole elms.



Figure 2. Elm trees #238 to 255, Northeast to southwest (right to left). Elms #251, 252, 253, 254 & 255 (six of the seven elms HortScience listed as tentative to preserve) are numbered.



RECOMMENDATIONS

1. **Remove all fifty-five existing American elm trees** in the O'Toole Elm Grove. Remove all elms at the same time so that they will not be left to serve as reservoirs for Dutch elm disease.
2. **Remove as many of the roots of these trees from the soil as possible** (especially the larger roots that originate close to the trunk).
3. **Fulfill the "replacement in kind" requirement** by planting a combination of 'Frontier' and 'Accolade' elms (*Ulmus carpinifolia* x *U. parvifolia*, and *Ulmus japonica* x *wilsoniana* 'Morton').
4. **Design, construct and install a historic plaque** explaining the history and significance of the previous O'Toole elm grove. In addition, this would be an excellent opportunity to provide information on proper and improper tree pruning, using the historic elm grove as an example of how improper pruning (topping) done many years ago ultimately caused these trees to decline.
5. **Develop a written elm tree management and record-keeping program** for the trees that will include state-of-the-art arboricultural practices to keep these trees as healthy and structurally safe as possible and also serve as an outdoor classroom of proper tree care practices for the community.
6. **As a part of the above program, monitor the newly planted elms frequently** for common problems that elm species experience such as elm leaf beetle and Dutch elm disease. Keep good written monitoring records. Catch problems in their early stages and implement best management practices promptly. Evaluate and revise the program as needed based upon tree condition, resources and evolving tree care information.



Figure 3. Elms #251 to 255 (Northeast to southwest, right to left).



BACKGROUND INFORMATION

KB Homes plans to construct new homes adjacent to the O'Toole Elm Grove. Included in the permits for this project is the requirement from the City of Milpitas to dedicate a portion of the property for use as a public park.

Two previous arboricultural firms have evaluated and made recommendations for the trees in the O'Toole Elm Grove. The first of these reports was prepared by Sealana & Associates and is dated March 2000. This report recommends removing all fifty-five trees based upon poor structural condition. The second report, prepared by HortScience, Inc. is dated March 2004. This report also recommends the removal of all fifty-five elm trees, but provides an additional management option to retain trees with the best health and structure, but exclude all activity within their fall zone. This retention would require a long-term commitment to crown restoration pruning. HortScience noted that these seven trees are in poor condition, and reiterated that their recommendation is to remove and replace all fifty-five of the existing elm trees.

In late November of 2004, James Lindsay (Acting Planning Manager for the City of Milpitas) called me and asked me to provide a third consulting arborist opinion on the O'Toole Elm grove.

MATERIALS & METHODS

Prior to visiting the O'Toole Elm Grove on December 3, 2004, I reviewed the following documents:

- **Arborist Report** relating to the O'Toole Elm Trees, Milpitas, California. Sealana & Associates, March 2000.
- **Tree Report**, Elmwood, Milpitas, California. HortScience Inc., March 2004.
- **Tree Survey Map**, *ibid.* February 2004.
- **O'Toole Elm Graphic**: an overlay of the seven trees mentioned in the HortScience report and their fall zones, superimposed on the proposed park layout plan proposal, provided by City of Milpitas.
- **Unapproved Minutes**, City of Milpitas, Parks, Recreation & Cultural Resources Commission, November 1, 2004.

Evaluation of the trees at the site on December 3, 2004:

I spent four hours at the site, evaluating each tree from the ground. I located the metal number tag (#201 – #255) on each of the fifty-five elm trees. These number tags were placed on the trees by a previous arborist and were used for the previous two arborist reports). I also used them for my own arborist report, in order to allow easy comparison between all three reports. I evaluated each tree from a close distance (a few feet from the trunk, looking at the trunk, the root collar (when visible) and the branches up as far as I was able to see), and also from afar (30 feet or more), often using binoculars. I assigned a condition rating for both vigor (health) and structure (stability) to each tree, using a scale of 0 – 100 (100 = excellent, 80 = good, 60 = fair, 40 =



poor, 20 = unacceptable). This tree data is included in Table 1 on page 9. I used the trunk diameter information included in the HortScience March 2004 report. I revisited the seven trees listed as possible candidates for preservation by HortScience, looking at these trees in greater detail and also photographing them. I took additional photographs of the partial or entire grove of trees, as well as some of the individual trees.

Research on Elm varieties and Discussion with Dr. Larry Costello, Horticultural Research Adviser, University of California

I am familiar with an ongoing research study on improved elm species and cultivar performance in California. This is the only controlled scientific study of this type so far in this state. Dr. Costello established an experimental elm grove with four improved elm species in Atherton, California in 1994. In March 2004 Dr. Costello published the 10-year results of this study in the Journal of Arboriculture¹. I derived my tentative recommendation for replacement elm species from this article, but I also contacted Dr. Costello by phone earlier this week to discuss my recommendations relative to his study, since the study is ongoing. I wanted to check for any new findings or information that might change my recommendations. From this conversation I was able to validate my original recommendation to plant 'Frontier' elms, as well as include Dr. Costello's suggestion to add 'Accolade' elms to the park planting (although this elm species has not been formally tested in California yet). Dr. Costello will be planting some additional elm species (including 'Accolade' at his study site.

In addition to the above study, I also researched American elm improvement on the Internet and reviewed research from the Department of Agriculture, U.S. National Arboretum in Washington, DC, which is also conducting research on improved elm development².

OBSERVATIONS

The historic elm trees are in very poor condition. The condition of these trees has already been extensively and accurately documented in the two previous arborist reports. I am not going to repeat that information in this report except to say that I agree with it completely.

The last time that these trees were evaluated by a consulting arborist firm prior to my evaluation was March of 2004. Since then I noticed that there have been several additional branch failures within the grove. Some of these branch failures were from live branches, and others were from dead branches. The diameters of these branches ranged from two to six inches, and the length of the branches from six to eighteen feet.

¹ Costello et al. Journal of Arboriculture, Vol. 30, No. 2, March 2004. A 10-year Evaluation of the Performance of Four Elm Cultivars in California, U.S.

² Townsend et al. U.S. Dept. of Agriculture, Agricultural Research Service, U.S. National Arboretum, Washington DC 20002. Variation in Response of Selected American Elm Clones to *Ophiostoma ulmi*.



DISCUSSION

In my opinion, and also in the opinion of the two previous consulting arborist firms that evaluated these elm trees, all fifty-five of the trees should be removed. The reason for this recommendation is because the trees will not be safe enough for a high-use area such as a public park and adjacent residences such as are proposed. Development around these trees (even if they are reasonably well-protected) will likely cause them to decline further, which will increase the rate of branch or possibly even whole tree failures. In my opinion it is not reasonable or advisable to retain the seven listed trees and exclude any activity within their fall zone. Instead, I recommend accepting the fact that these trees should be removed and proceed forward. Try to look at this more as an opportunity for the future, rather than a loss in the present.

I certainly do not take the removal of these historic elm trees lightly. I also believe that the previous two arborists who evaluated and reported on these trees share the same view. Arborists promote the preservation of tree when possible, but we also must consider the safety of the people and property that will be in the vicinity of those trees. In my opinion it would be irresponsible to recommend that some or all of the elm trees be retained. There are simply too many significant defects in these large trees. Many of these trees also have significant amounts of decay within trunks or branches – often in very close proximity to other large branches. We cannot tell with certainty exactly how much decay is within a tree, and if and when this decay could cause a particular branch (or an entire tree) to fail. When there are obvious large defects in large trees in a public area, and these defects cannot be reasonably remedied by tree care practices or other methods, then it is time to remove the trees.

I must repeat the HortScience recommend (including saving seven of the trees) "I reiterate that our recommendation is to remove and replace all of the elms". Please take this recommendation seriously. This is sound advice. HortScience literally "wrote the book" on tree hazard evaluation³. They are one of (if not the most) experienced and knowledgeable urban arboricultural consulting firms relative to tree failure evaluation, analysis and prevention in the world today.

³ Matheny & Clark. International Society of Arboriculture, 1994. A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas, 2nd Edition, and the included International Society of Arboriculture Tree Hazard Evaluation Form.



Figure 4. Close-up of upper canopy of elm #253, one of the "seven" elms. The two pink arrows point to large topping cuts that are at least 12 inches in diameter and have decay (probably a significant amount) associated with them. There are several large diameter branches that have grown just below and around these wounds. These branches are very prone to failure, as has been explained in previous reports. In fact, many of these branches (as well as larger portions of the tree including part of the upper trunk) have indeed failed in the past.

Moving on – planting the replacement trees:

The existing American elm trees show symptoms of Dutch elm disease and are heavily infested with a common pest insect of elms, elm leaf beetle. These are expected problems of unimproved American elm cultivars. These pests were described in detail in the Sealana & Associates report (March 2000). The main argument against propagating the existing American elms is that these trees are susceptible to, and may ultimately serve as reservoirs for, Dutch elm disease and elm leaf beetle. Dutch elm disease is spread by insects (beetles) and therefore is similar to "airborne" diseases that very difficult to manage). Infected elms in one area of the City can serve to spread the disease to other elms in a far removed area of the City or in surrounding areas, because the beetles can fly. Even though the replacement trees you plant will be "resistant" to Dutch elm disease, I would not take a chance in planting any trees that are known to be susceptible and can serve as reservoirs of the disease. Resistance to insects and diseases is *not guaranteed to last forever, but it is often our best defense against plant pests*. The reason that Dr. Costello and I recommend that you plant two species of elms is so that there is greater genetic variation between the trees. This lessens the chance for resistance to develop, and also the impact of resistance, should it develop.



Service since 1984

Much research has been done within the past ten years on identifying and developing cultivars (clones) or hybrids of American elm and other elm species that are resistant to either or both of these serious elm problems. Because of this opportunity, I recommend that you do not try to regenerate (by seed, cuttings, scions or suckers) the existing elm trees in order to obtain replacement trees for the site. Instead, I recommend that you plant improved elm species and cultivars that are resistant to Dutch elm disease and elm leaf beetle (if possible), and are close in appearance to American elm. The elms that I recommend are the 'Frontier' elm (pollination cross between *Ulmus carpinifolia* (smooth-leaved elm) and *U. parvifolia* (Chinese elm), and the 'Accolade' elm, *Ulmus japonica* x *wilsoniana* 'Morton'. Dr. Costello agrees with this recommendation, based upon his elm study and ongoing research. None of the American elms (*Ulmus americana*) in Costello's study had good results in California. The best performers in this state were improved cultivars of other elm species. The table and explanatory box on the next two pages summarize the results of the California elm study to date.



10-Year Evaluation of the Performance of 4 Elm Cultivars in California, U.S.

Table 1 Summary Table of results adapted from the above research paper, which appeared in the *Journal of Arboriculture*, Vol. 30, No. 2, March 2004, Costello et al. International Society of Arboriculture.

| Cultivar | Species | DED tolerance | ELB Damage | Height 10 yrs | Structure | Notes |
|--------------------|--------------------------------|--------------------------|---------------------------------|---------------|---|--|
| 'American Liberty' | <i>americana</i> | Susceptible | Hi if Hi popn, Low if low popn | 32 ft. | Moderate pruning reqmt. | Fast growth rate |
| 'Frontier' | <i>carpinifolia/parvifolia</i> | High Resistance | Hi if Hi popn, Low if low popn | 37 (tallest) | Upright, pyramidal. Requires least amount of pruning. | Red-purple fall foliage. More upright than U. <i>parvifolia</i> . Fast growing. |
| 'Prospector' | <i>wilsoniana</i> | High Resistance | Low if regardless of popn size. | 23 | Upright, round-headed form. Requires intensive training as young tree, but very good form after that. Hi pruning reqmt when young, but low when mature. | Will not serve as Am. Elm substitute (due to round headed form), but has promise as moderate-size tree for streets, parks or yards, esp. in areas w/ hi ELB. Do not plant if hi Bo in soil or H2O. |
| 'Valley Forge' | <i>americana</i> | Highest tolerance to DED | Hi if Hi popn, Low if low popn | | Poor in CA (branch dominant) so removed from study. Classic vase-shape of Am. Elm. | |
| None (control) | <i>americana</i> | Susceptible | Hi if Hi popn | 34 | Moderate | |

The main drawback with the Frontier elm is that it has been found to sustain high foliage damage when elm leaf beetle populations are high. To avoid this problem, another elm, the Prospector elm could be used. Prospector elm (a cultivar of *Ulmus wilsoniana*, the smooth-leaved elm) has very high resistance to elm leaf beetle damage, even when the beetle population is high. Prospector elm however, is slower growing and has a lower, round-headed shape. It looks less like an American elm than does the Frontier elm, which is taller and very fast growing.



Comparison between Frontier and Prospector Elms:

'Frontier':

Advantages: High DED resistance, fastest growing, tallest in shortest period of time, very low pruning requirement, striking red/fall purple fall foliage color (most elms have yellow fall foliage color).

Drawbacks: will sustain high damage from ELB if populations are high (but low damage if populations are low).

'Prospector':

Advantages: High DED resistance, low ELB damage regardless of population size. Leaves orange-red in spring and yellow in fall.

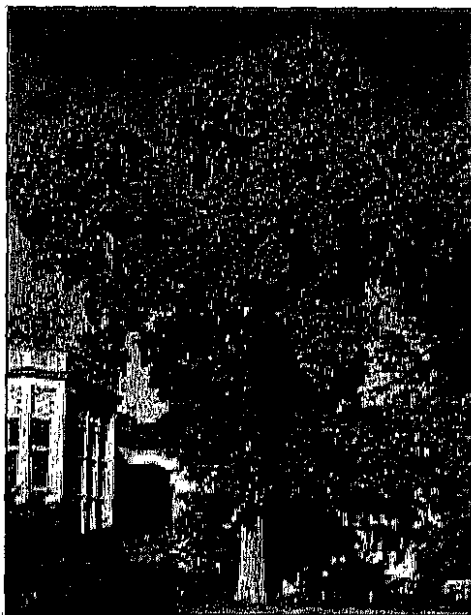
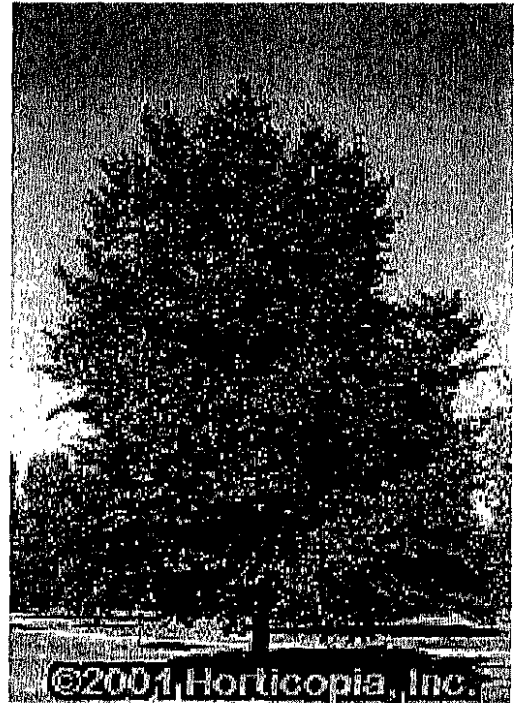
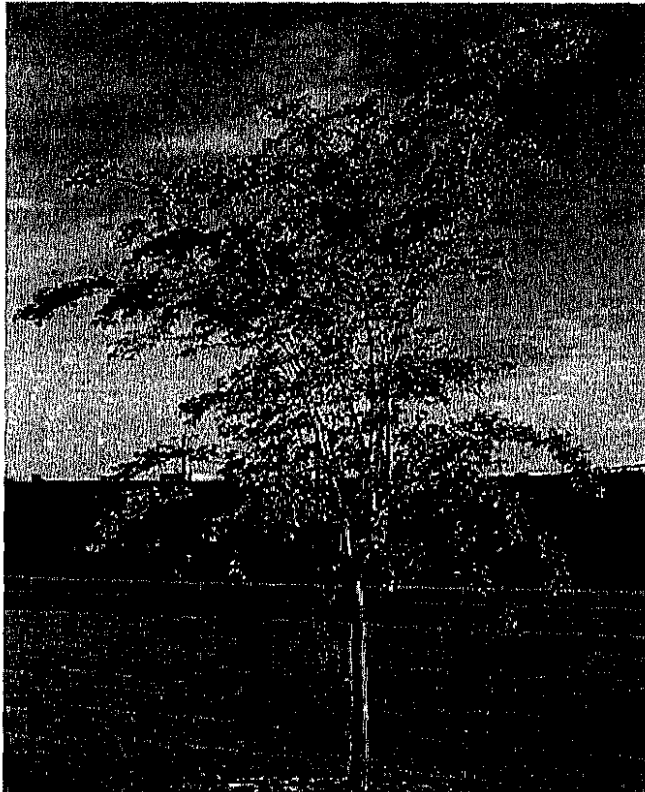
Drawbacks: intensive pruning requirement when young, but low when mature, shortest tree with round-headed form. As a result of this form, will likely not serve as a substitute for American elm, but appears to have promise as a moderate-sized tree for streets, parks or yards, particularly in areas with sizeable ELB populations. Leaf scorch symptoms in areas with high boron concentrations in soil or water.

Elm leaf beetle, while a nuisance, does not normally kill trees. My thought was that the beetle could be controlled (if necessary) with some of the more "environmentally safe" insecticides when the trees are young, in order to reduce plant stress and maximize tree growth. As the trees grow larger, the beetle feeding should become less noticeable. Beetle populations also fluctuate from year to year, so not every year will be a bad beetle year. In addition, I am recommending interplanting the Frontier elms with another elm species that is very resistant to elm leaf beetle attack, the Accolade elm.

Although the Accolade elm has not been scientifically tested in California, results in other states (such as Colorado) have been good. This elm species, like Frontier elm, is also not an "American" elm. The Accolade elm however, has shown high resistance to both Dutch elm disease and elm leaf beetle. In addition, Accolade is very close in appearance to American elm – even more so than the Frontier elm. Although planting Accolade elm would be somewhat experimental, I think it would be worthwhile to try from an aesthetic and also a genetic variation standpoint. It would provide some subtle variation within the trees stand – both in form, texture and in fall color (Accolade fall foliage color is yellow, Frontier is red). You would also not be putting all your eggs in one basket by planting one tree cultivar. If one elm type turns out to be less than ideal, all trees in the park are not affected in this manner – you will still have the other variety. The City of Burlingame, California will be replacing their large, old Eucalyptus trees along El Camino with both Frontier and Accolade elms. They did quite a bit of research on elms prior to selecting these two cultivars.

Deborah Ellis, MS

Consulting Arborist & Horticulturist



Upper left photo: young Frontier elm.

Upper right: Mature Frontier elm

Lower left: Mature Accolade elm growing a
Moreton Arboretum, Lisle Illinois.



'Accolade' elm photos taken by Dr. Costello at the Moreton Arboretum, Lisle, Illinois.

Upper photo: This is one of three trees planted in 1992. The trees are now 8 to 12 inch DBH.

Lower photo: This tree is about 20 years old. It was transplanted in 1999 - moved about 25 feet from its prior to its present location. Before transplanting it was undercut, wrapped and stored for 1.5 years, then planted.





CONCLUSION

Look at this situation more as an opportunity and less as a problem. Although large, historic trees will be lost, there is the opportunity to begin a new urban forest that will be healthy, safe and will far outlive any of the present elm trees. The existence and significance of the original elm grove will not be lost along with the trees, but will instead be preserved. Heed the recommendations of three arboricultural consulting firms to remove all fifty-five elm trees. Do not stick too tightly to the "replacement in kind" and feel that you must plant an American elm (*Ulmus americana*). Instead, plant an improved elm variety. If you do this, you will thank yourself in the future with reduced maintenance costs, longer tree life and better tree appearance.

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service. Please call me if you have questions or if I can be of further assistance.

Sincerely,

Deborah Ellis

Deborah Ellis, MS.

Consulting Arborist & Horticulturist

Certified Professional Horticulturist #30022, ASCA Registered Consulting Arborist #305, W.C.I.S.A. Certified Arborist #457



APPENDIX

REFERENCES

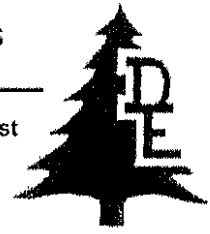
- **Costello et al.** *Journal of Arboriculture*, Vol. 30, No. 2, March 2004. A 10-year Evaluation of the Performance of Four Elm Cultivars in California, U.S. Also a personal conversation with Dr. Costello 12/10/04. In addition, Dr. Costello also provided photos of Accolade elm, and notes from Jennifer Pfaff (see below).
- **HortScience Inc.**, March 2004. Tree Report, Elmwood, Milpitas, California.
- **Matheny & Clark.** International Society of Arboriculture, 1994. A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas, 2nd Edition, and the included International Society of Arboriculture Tree Hazard Evaluation Form.
- **Pfaff, Jennifer** (Historical Society of Burlingame). Notes on Accolade Elm provided to Dr. Costello in January 2004
- **Sealana & Associates**, March 2000. Arborist Report on the O'Toole Elm Trees, Milpitas, California.
- **Townsend et al.** U.S. Dept. of Agriculture, Agricultural Research Service, U.S. National Arboretum, Washington DC 20002. Variation in Response of Selected American Elm Clones to *Ophiostoma ulmi*.

SOURCES FOR FRONTIER & ACCOLADE ELMS

- **J. Frank Schmidt & Son Co.**, Boring, Oregon. 800-825-8202. Web site URL (will take you to the Accolade elm page: http://www.jfschmidt.com/articles/accolade_elm/).
- **Botany Shop**, MI, 800-855-3300, Mike Shade (Accolade Elm)

ASSUMPTIONS & LIMITATIONS

1. This report is based upon my observations, conclusions and opinions at the time that the report was written. I reserve the right to change my conclusions and opinions based upon new or additional evidence or facts that are uncovered in the future.
2. I certify that I have no financial or other interest in the trees or the property that is described in this report.
3. The subject fifty-five American elm trees on site were inspected by Deborah Ellis on December 3, 2004, and their condition as stated in this report reflect that date. No other trees or plants on site were inspected. Tree inspections were brief, by ground and without root collar excavations or other probing or boring done upon trees.
4. Tree locations were provided by Riggero-Jensen-Azar & Associates and are shown on the Tree Survey Map (not included in this report) annotated by HortScience Inc., February 2004. Most of the tree locations are assumed to be accurate but this should be verified in the field.

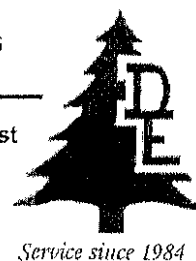


5. I have not seen any plans, details or specifications for this project except for the following documents that are listed on page 4.
6. Please note that because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree.

TREE DATA

Data from my December 3, 2004 evaluation of the existing trees (the Tree Table) begins on the next page. An explanation of each column in the Table is below:

- 1) **Tree #:** This is the tree number that corresponds with the metal number tag that was placed on each elm tree by a previous consulting arborist. The elm numbers range from 201 to 255.
- 2) **DBH:** Trunk diameter in inches, rounded to the nearest inch, from the HortScience March 2004 Tree Report.
- 3) **Condition (vigor)** This is the overall health of the tree, which is half of the condition rating. The numeric rating scale used is from 10 to 100 with 100 = excellent, 80 = good, 60 = fair, 40 = poor, 20 = unacceptable, and 0 = dead.
- 4) **Condition (Structure):** this is the mechanical stability of the tree, which is the other half of the complete condition rating. The numeric rating is the same as explained above.
- 5) **Suitability for Preservation:** Each tree was individually rated for suitability for preservation based upon the factors discussed above (condition, species, age and longevity). Preservation suitability was rated as Good, Moderate or Poor in the same manner as described in the HortScience March 2004 report (page 5).
- 6) **Action:** This is the disposition (Save, Remove or Debatable) that I recommend for the tree, based upon all the factors previously considered plus the estimated impact of construction on the tree, and the suitability of the tree for the proposed use of the site.

**Table 2, Tree Table** (also continued on next page)

| Tree # | DBH | Condition (Vigor) | Condition (Structure) | Preservation Suitability | Action | Reason | Notes |
|--------|-----|-------------------|-----------------------|--------------------------|--------|-----------|---|
| 201 | 40 | 50 | 20 | Poor | Remove | structure | Recent 3 in diam. branch fail |
| 202 | 43 | 50 | 20 | Poor | Remove | structure | Large epicormic branches below large pruning wound extend over school to N. |
| 203 | 36 | 50 | 20 | Poor | Remove | structure | |
| 204 | 33 | 50 | 20 | Poor | Remove | structure | |
| 205 | 34 | 50 | 20 | Poor | Remove | structure | |
| 206 | 33 | 40 | 20 | Poor | Remove | condition | |
| 207 | 38 | 50 | 20 | Poor | Remove | structure | No tag. I measured trunk diameter |
| 208 | 29 | 50 | 15 | Poor | Remove | structure | |
| 209 | 33 | 50 | 15 | Poor | Remove | structure | |
| 210 | 33 | 50 | 20 | Poor | Remove | structure | |
| 211 | 34 | 50 | 15 | Poor | Remove | structure | |
| 212 | 30 | 50 | 20 | Poor | Remove | structure | |
| 213 | 32 | 50 | 20 | Poor | Remove | structure | |
| 214 | 38 | 20 | 0 | Poor | Remove | condition | |
| 215 | 35 | 50 | 20 | Poor | Remove | structure | |
| 216 | 30 | 50 | 20 | Poor | Remove | structure | |
| 217 | 32 | 50 | 20 | Poor | Remove | structure | |
| 218 | 29 | 50 | 20 | Poor | Remove | structure | |
| 219 | 33 | 50 | 20 | Poor | Remove | structure | |
| 220 | 30 | 50 | 20 | Poor | Remove | structure | |
| 221 | 33 | 50 | 20 | Poor | Remove | structure | HS possible save |
| 222 | 32 | 50 | 20 | Poor | Remove | structure | |
| 223 | 32 | 50 | 20 | Poor | Remove | structure | |
| 224 | 24 | 50 | 40 | Poor | Remove | structure | |
| 225 | 35 | 50 | 20 | Poor | Remove | structure | Recent 4 in. branch failure |
| 226 | 31 | 50 | 20 | Poor | Remove | structure | |
| 227 | 32 | 60 | 20 | Poor | Remove | structure | |
| 228 | 32 | 50 | 20 | Poor | Remove | structure | |
| 229 | 36 | 60 | 20 | Poor | Remove | structure | |
| 230 | 31 | 40 | 10 | Poor | Remove | condition | Recent 10-12 in. by 15 ft long branch failure |
| 231 | 30 | 20 | 0 | Poor | Remove | condition | |
| 232 | 28 | 40 | 10 | Poor | Remove | condition | |
| 233 | 34 | 70 | 40 | Poor | Remove | structure | |
| 234 | 28 | 20 | 0 | Poor | Remove | condition | |
| 235 | 34 | 60 | 20 | Poor | Remove | structure | |

**Table 2 Tree Table** (continued from previous page)

| Tree # | DBH | Condition (Vigor) | Condition (Structure) | Preservation Suitability | Action | Reason | Notes |
|--------|-----|-------------------|-----------------------|--------------------------|--------|-----------|------------------|
| 236 | 27 | 40 | 10 | Poor | Remove | condition | |
| 237 | 33 | 50 | 20 | Poor | Remove | structure | |
| 238 | 29 | 40 | 15 | Poor | Remove | condition | |
| 239 | 35 | 60 | 20 | Poor | Remove | structure | |
| 240 | 26 | 60 | 30 | Poor | Remove | structure | |
| 241 | 323 | 70 | 40 | Poor | Remove | structure | |
| 242 | 23 | 10 | 0 | Poor | Remove | condition | |
| 243 | 34 | 70 | 40 | Poor | Remove | structure | |
| 244 | 28 | 20 | 10 | Poor | Remove | condition | |
| 245 | 32 | 70 | 40 | Poor | Remove | structure | |
| 246 | 29 | 50 | 40 | Poor | Remove | structure | HS possible save |
| 247 | 33 | 70 | 40 | Poor | Remove | structure | |
| 248 | 30 | 40 | 20 | Poor | Remove | condition | |
| 249 | 29 | 70 | 40 | Poor | Remove | structure | |
| 250 | 32 | 40 | 15 | Poor | Remove | condition | |
| 251 | 33 | 60 | 40 | Poor | Remove | structure | HS possible save |
| 252 | 34 | 60 | 40 | Poor | Remove | structure | HS possible save |
| 253 | 34 | 60 | 40 | Poor | Remove | structure | HS possible save |
| 254 | 36 | 50 | 20 | Poor | Remove | structure | HS possible save |
| 255 | 36 | 70 | 20 | Poor | Remove | structure | HS possible save |